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radiation


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either the process by which energy is emitted from a source and propagated through the surrounding medium or the energy involved in this process. Familiar examples of radiant energy include light (a form of electromagnetic **radiation**) and sound (a form of acoustic **radiation**). Both electromagnetic and acoustic **radiations** are commonly described as waves that can vary over great ranges of either frequency or intensity. Electromagnetic **radiation** also is often treated as discrete packets of energy, called photons, or quanta. At very high frequencies, the energy of electromagnetic **radiation** becomes equivalent to appreciable quantities of mass, and the distinction between waves and particles becomes arbitrary. Much of the **radiation** emitted by radioactive elements takes the form of alpha rays, beta rays, and streams of other subatomic particles.

Radiation is treated in several articles. For the origin, nature, and propagation of energy in the form of gamma rays, X rays, ultraviolet rays, visible light, heat, radio waves, and the like, see [electromagnetic radiation](#); [light](#); [radioactivity](#). For corresponding treatment of acoustic **radiations**, see [acoustics](#). For discussion of the interaction of electromagnetic waves and subatomic particles with matter, living and nonliving, see [radiation](#).


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